- 35. The bond-ply material of claim 34, further comprising a B-stage resin layer having a thickness of from about 2 micrometers to about 200 micrometers and covers the core first surface, the core second surface, or both the core first surface and the core second surface.
- 36. The bond-ply material of claim 34, wherein the core is a C-stage core.
- 37. The bond-ply material of claim 34, wherein the plurality of vias is perpendicular to the plane of the material.
- 38. The bond-ply material of claim 34, wherein the nonwoven reinforcing material is a mixture of micro-fiber glass and organic fibers.
- 39. The bond-ply material of claim 38, wherein the nonwoven reinforcing material includes from about 10 to about 90 wt % of micro-fiber glass and from about 10 to about 90 wt % of a second reinforcing material selected from organic fibers, organic microfibers, organic pulp and mixtures thereof.
- 40. The bond-ply material of claim 39, wherein the organic fibers are selected from poly (p-phenylene-2,3-benzobisoxazole) staple fibers, pulp, microfibers and mixtures thereof.
- 41. The bond-ply material of claim 34, including a plurality of essentially undamaged laser ablated vias having diameters of from 5 to 150 micrometers.
- 42. The bond-ply material of claim 39, wherein at least 80% of the micro-fiber glass has a diameter of less than about 1 micron.
- 43. The bond-ply material of claim 38, including from about 5 to about 55 wt % of non-woven reinforcing material and from about 45 to about 95 wt % polymer selected from a thermoplastic polymer and a B-stage thermosetting resin and mixtures thereof.
- 44. The bond-ply material of claim 34, wherein the electrically conductive material comprises a conductive paste, a conductive ink, a conductive polymer or mixtures thereof.
- 45. The bond-ply material of claim 34, wherein the conductor precursor generates a conductive material upon heat treatment.
- 46. The bond-ply material of claim 44, wherein the conductive paste comprises a particulate-based high-solid conductive paste.